

ABSTRACT OF THE DISCLOSURE

An adjustable radio frequency data communications device has a monolithic semiconductor integrated circuit with integrated circuitry, interrogation receiving circuitry provided on the monolithic integrated circuit forming at least part of the integrated circuitry and configured to receive an interrogation signal from the interrogator unit, an antenna electrically coupled to the interrogation receiving circuitry and configured to communicate with the remote interrogator unit, a power source electrically coupled to the integrated circuitry and configured to generate operating power for the communications device, and at least one of the antenna and the interrogation receiving circuitry having reconfigurable electrical characteristics, the electrical characteristics being reconfigurable to selectively tune the at least one of the antenna and the interrogation receiving circuitry within a range of tuned and detuned states to realize a desired receiver sensitivity of the communications device. Additionally, a method for tuning receiver sensitivity and/or transmitter sensitivity according to construction of the above device is disclosed.